to the credit of formulating and demonstrating a proposition which, though it has received the dissent of Mr. Holmes and in turn been upheld by R. Locke Johnson, of London, and upon this side of the water has created some comment, is undoubtedly correct.

We cannot close this notice without referring to the plates which preface the book, and of which we are told, they are "engraved on copper and coloured by hand." With this impressive announcement we turn to them with an impending sense of artistic gratification, and are struck with wonder—wonder at what they are intended for. They certainly fail to convey to us even a feeble idea of any throat affection with which we are acquainted.

The paper, type, and presswork are creditable to the publishers, and the addition of a copious index will add to the usefulness of the present edition. G. M. L.

ART. XLIV.—*The Spectroscope in Medicine.* By CHARLES A. MACMUNN, A.B., M.D. Univ. Dub. 8vo. pp. xiv., 198. Philadelphia: Lindsay & Blakiston, 1880.

IN his preface the author states that the spectroscope seems likely to be of almost as great use in medicine as it has already proved in terrestrial, solar, and stellar chemistry, and that the objections to its employment have depended upon erroneous ideas of the difficulties in the use of the instrument. Such ideas, he says, have arisen from a want of a simple treatise on the subject, and this much-needed work he now claims to have laid before us. Using the word medicine in its most extended sense, we might accept the title of the book, but spectrum analysis, even as here elucidated, is applicable to the investigations of the physiologist and medico-legal expert, not to the practice of the physician.

The subject is introduced by a brief explanation of the principles of optics involved in spectrum analysis, and a description of various forms of spectroscopes and micro-spectroscopes. The bright-line spectra are recommended as a means of identifying the mineral constituents of the ash of animal matters; except for the detection of minute traces of rare metals, most chemists would prefer the usual chemical tests. Reynolds' spectroscopic method for the detection of metallic poisons is given in two pages in quotation marks. The analysis of morbid gases is made by examining the spectra of the gases, inclosed in Geissler-tubes under diminished pressure. Very truly, as Mr. MacMunn quotes from Thudichum, must it "be left to the future to decide how far these spectra can be practically utilized in the diagnosis of gases which occur in the animal economy."

Dr. Bence Jones's experiments on the chemical circulation in the body are given in seven pages, all quoted. The researches of Vogel and of Sorby on the identification and distinction of "physiological absorption spectra" are studied, for the most part, in the words of the investigators, after which follow some general directions for the examination of absorption spectra, with especial reference to the detection of blood. The author explains at some length why he thought at one time that the detection of reduced hemoglobin in the blood of the right auricle and right ventricle was a proof of the viability or non-viability of the fœtus, and why these views are not tenable. The results of Thudichum's researches on hematin are given in five quoted pages. Hoppe-Seyler's hematin without iron is stated to be identical with Thudichum's cruentin, although the latter contains 1.51 per cent. of iron. A list of twenty-seven acids, of which Preyer studied the action on hematin, is given without explanation. Of what interest to the profession can it be to investigate the action of hydrochloric acid and tin, or of phosphorus chloride containing free phosphorus, on hematin? The first reaction produces hydrobilirubin, as shown by Hoppe-Seyler, but the author seems to have overlooked this fact.

The author distinguishes a great many kinds of hematin, the distinction depending upon the various absorption spectra of hematin under different conditions, the principal condition being *the amount of chemical action on hemoglobin.* We might so produce a thousand bodies from two, considering each phase of one molecular vibration as a new compound.

The detection of blood pigment in urine can only be effected by aid of the spectroscope, and this method is well set forth, thus, "hold the vessel containing it between the eye and the source of light, and examine with an ordinary pocket spectroscope; if it contain blood, two dark bands are visible" in the yellow and green.

Hematin was detected in three specimens of paraovarian fluid and one of ovarian, out of five. These fluids were subjected to quantitative analysis, the results being given. It is stated that the spectroscope will thus "enable the contents of ovarian and parovarian cysts to be diagnosed from other fluids resembling them, in many cases," but that it "will not enable parovarian to be distinguished from ovarian cysts." Are the contents of all these cysts constant? The author fails to make this point clear.

Considerable space is devoted to a description of Sorby's method for the detection of blood stains. The method of Dr. J. G. Richardson is also quoted, from the *Microscopical Journal*, but although Dr. Richardson succeeded in detecting a much smaller quantity of blood than Mr. Sorby, the author advises "those who are engaged in such research to follow Mr. Sorby's advice, as his methods were arrived at after prolonged and careful study." Mr. MacMunn thinks that Dr. Richardson "goes wide of the mark, as he has to bring in the aid of the microscope," but what does Mr. MacMunn do when he brings the smell of burnt feathers as a test for an albuminoid body and the quantitative analysis of serous effusions into a book on the spectroscope?

A very poor general chemical sketch of the bile is given, after which Mr. MacMunn gives a description of the spectra of the bile of seventeen animals, as studied by himself. We suppose the exact application of these facts to medicine will follow in another volume.

Directions are given for the examination of Gmelin's reaction and Pettenkofer's reaction by the spectroscope; most physicians will be satisfied to make them in test-tubes. The author is very positive that urobilin exists in normal urine, but Hoppe-Seyler, who carefully studied this point, came to the conclusion that normal human urine contains no urobilin. MacMunn says, indeed, that it may sometimes be absent in disease, but that he does not know in what disease. "We may believe that what have been supposed to be the true colouring matters of bile and of urine are not such, but probably a mixture of several substances." Can we include in this case bilirubin, which occurs in well-defined crystals, and indican, which is easily extracted from urine?

The book is largely made up of quotations, the author having a happy manner of stating, "—— is so explicit on this point that I cannot resist quoting him." It contains three very well-executed chromo-lithographs, mapped and drawn by the author; these, and the extended bibliography at the end of the book, will make it serviceable to those engaged in physiological research. The descriptions and explanations are not well balanced; more care and thoroughness would have resulted in a more valuable addition to the literature. W. H. G.

ART. XLV.—*Minor Gynecological Operations and Appliances, for the Use of Students.* By J. HALLIDAY CROOM, M.B., M.R.C.P.E., Lecturer on Midwifery and Diseases of Women at the School of Medicine, etc. 12mo. pp. 106. Edinburgh: E. & S. Livingstone, 1879.

THIS little volume was prepared as a class manual, or syllabus, and intended chiefly for Dr. Croom's own clinical students; it therefore makes no pretensions to be other than a book for beginners, designed to instruct them in diagnostic characteristics and appliances, and minor gynæcology. The book opens with seven excellent plates of the common maladies of the os and cervix uteri: and then passes on to teach how to examine a patient per vaginam, explaining the anatomical characters of all the parts, external and internal, the bimanual method of exploration, and giving in outline the diseases to which the vulva, hymen, vaginal walls, cervix, os uteri, uterus, and ovaries are liable. These are mainly in the form of heads, to be completed from larger works. The author then treats of examination of and by the rectum, giving valuable hints as to method and usefulness. Chapters are devoted respectively to the *speculum*, and its value in exploration; the *sound*, its contraindications, what it teaches, its capabilities, and mode of use; the *tent* and its use, with mode of introduction; the *female catheter*, and what it teaches; *dilatation and exploration of the bladder*, with treatment by injections; *vaginismus*, *vaginal diseases* and the douche; *pessaries*, *cervical applications*, *intra-uterine applications*, *the curette*, and *the hypodermic uses of ergotine.* The book teaches what ought to be studied, rather than the minutiæ to be learned, and is chiefly valuable as a syllabus, to direct the student in a course of studies. R. P. H.

ART. XLVI.—*Cancer of the Rectum, its Pathology, Diagnosis, and Treatment.* By W. HARRISON CRIPPS, F.R.C.S., Surgeon to the Great Northern Hospital, etc. 12mo. pp. viii., 191. London: J. & A. Churchill, 1880.

THIS monograph deals with a subject of such paramount importance that it would be of interest to the profession if its value were much less than it is; but the author has given the result of such pains-taking and accurate work that he has produced a volume which should be read by every surgeon who treats rectal disease. After stating his opinion that cancer is not of constitutional origin, but that the starting-point lies in